



1/22

100

OPTICAL
AMPLIFIER

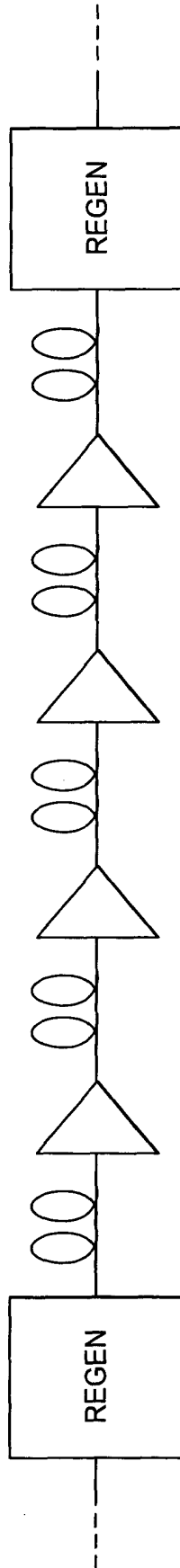


FIG. 1



2/22

200

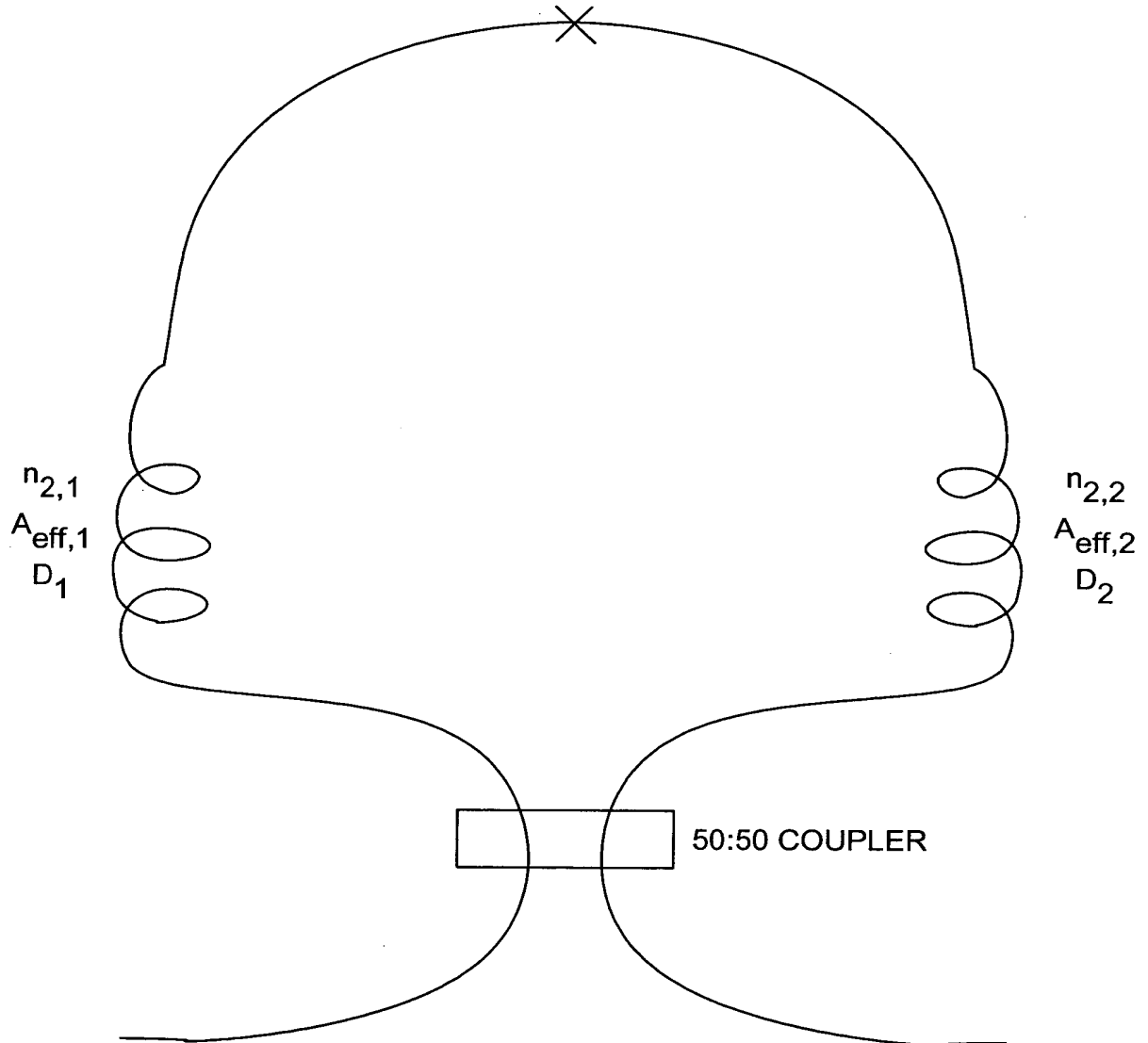


FIG. 2



3/22

FIG. 3A

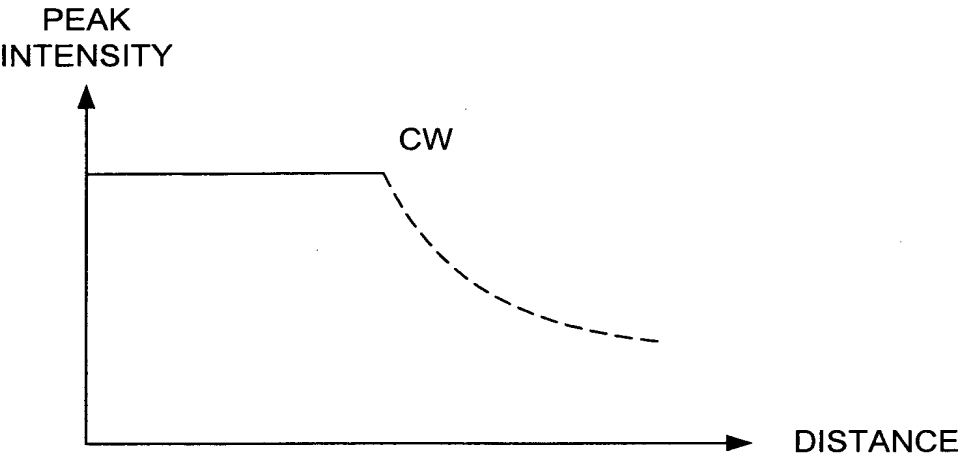


FIG. 3B

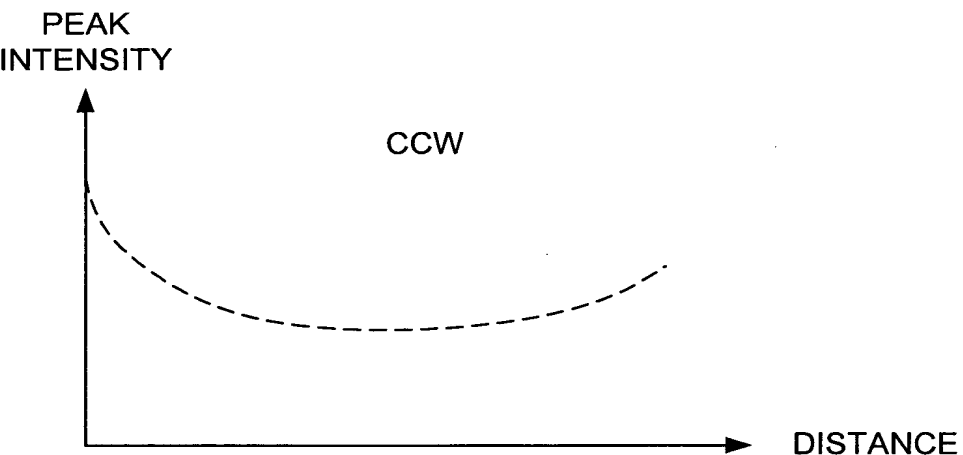
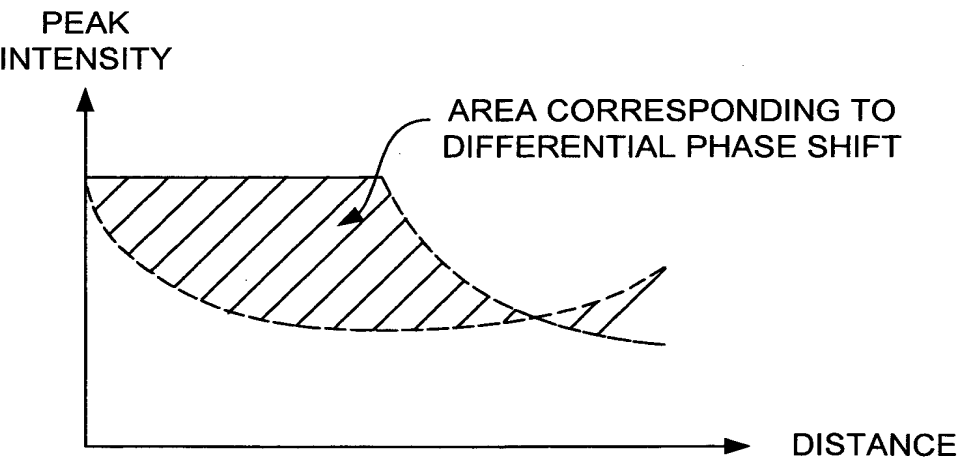


FIG. 3C





4/22

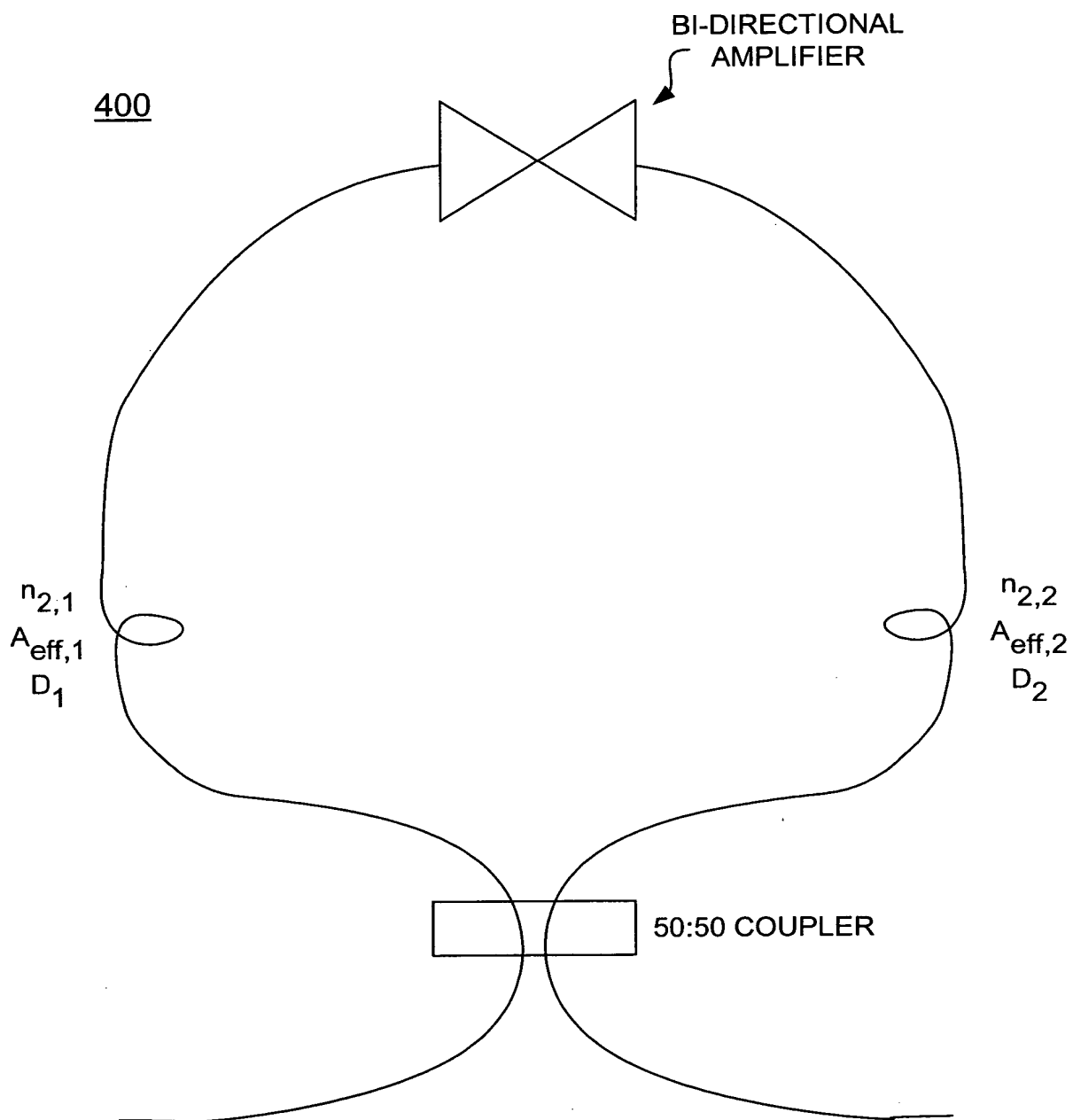


FIG. 4



5/22

500

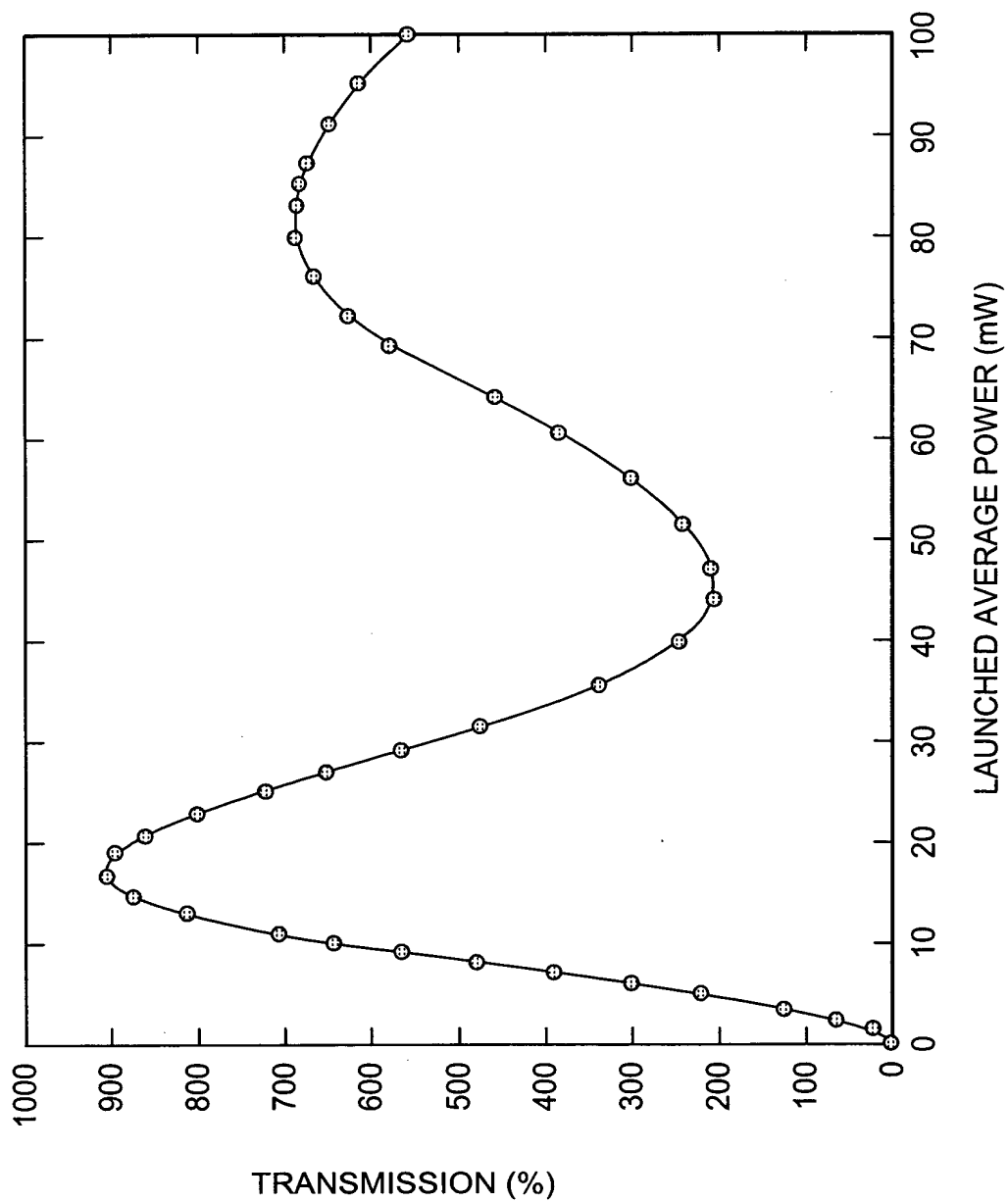


FIG. 5



6/22

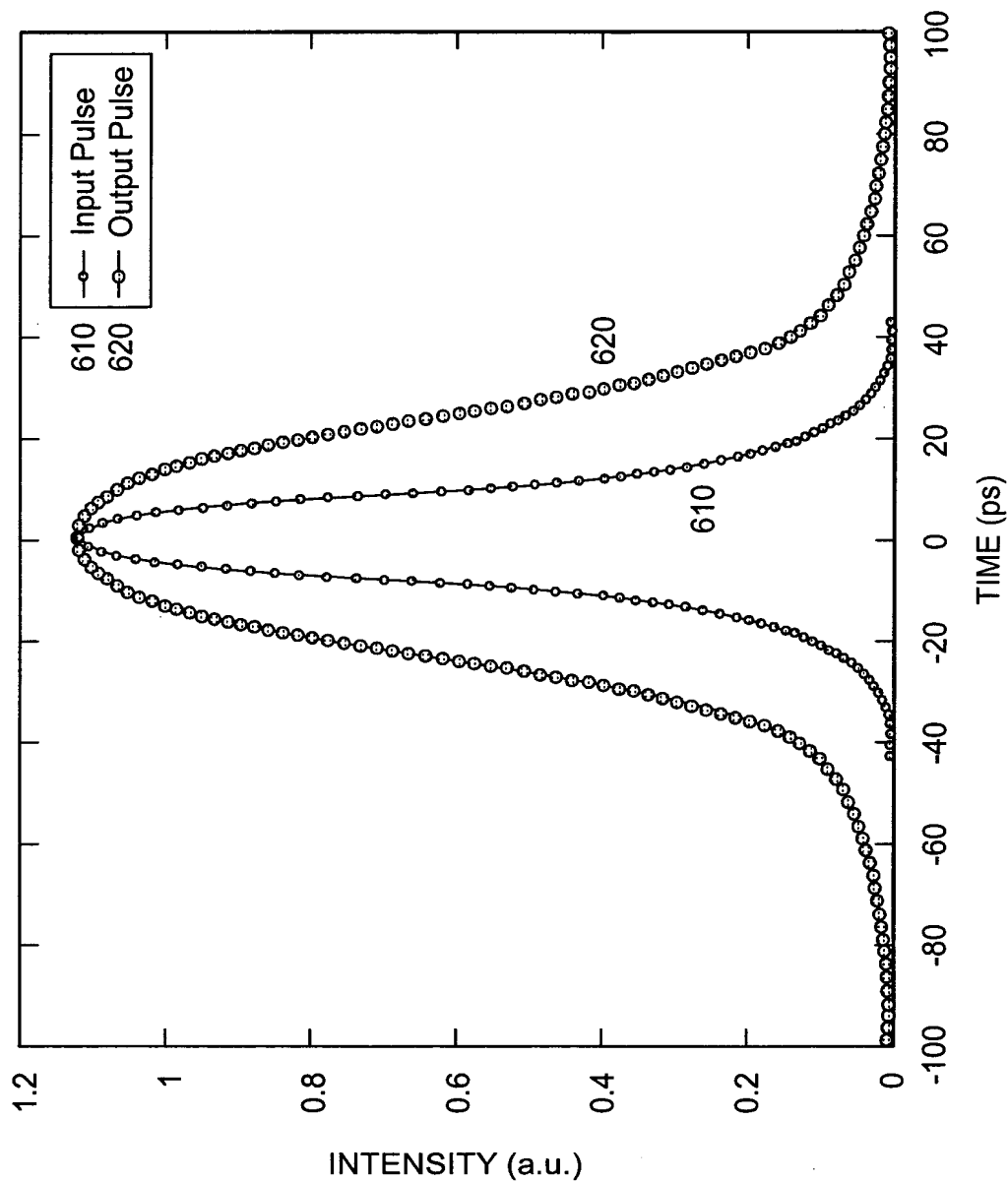


FIG. 6A

7/22

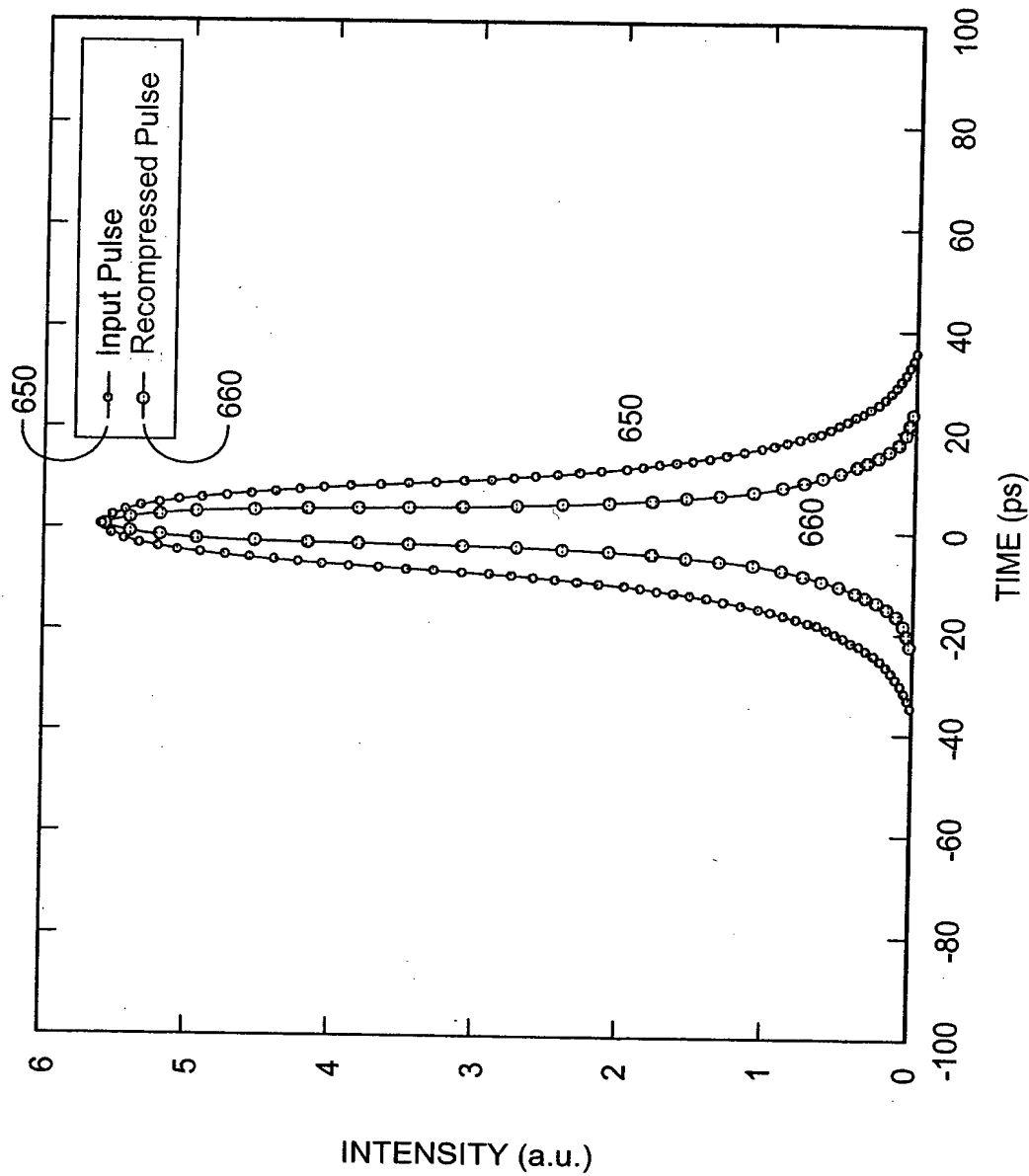


FIG. 6B



8/22

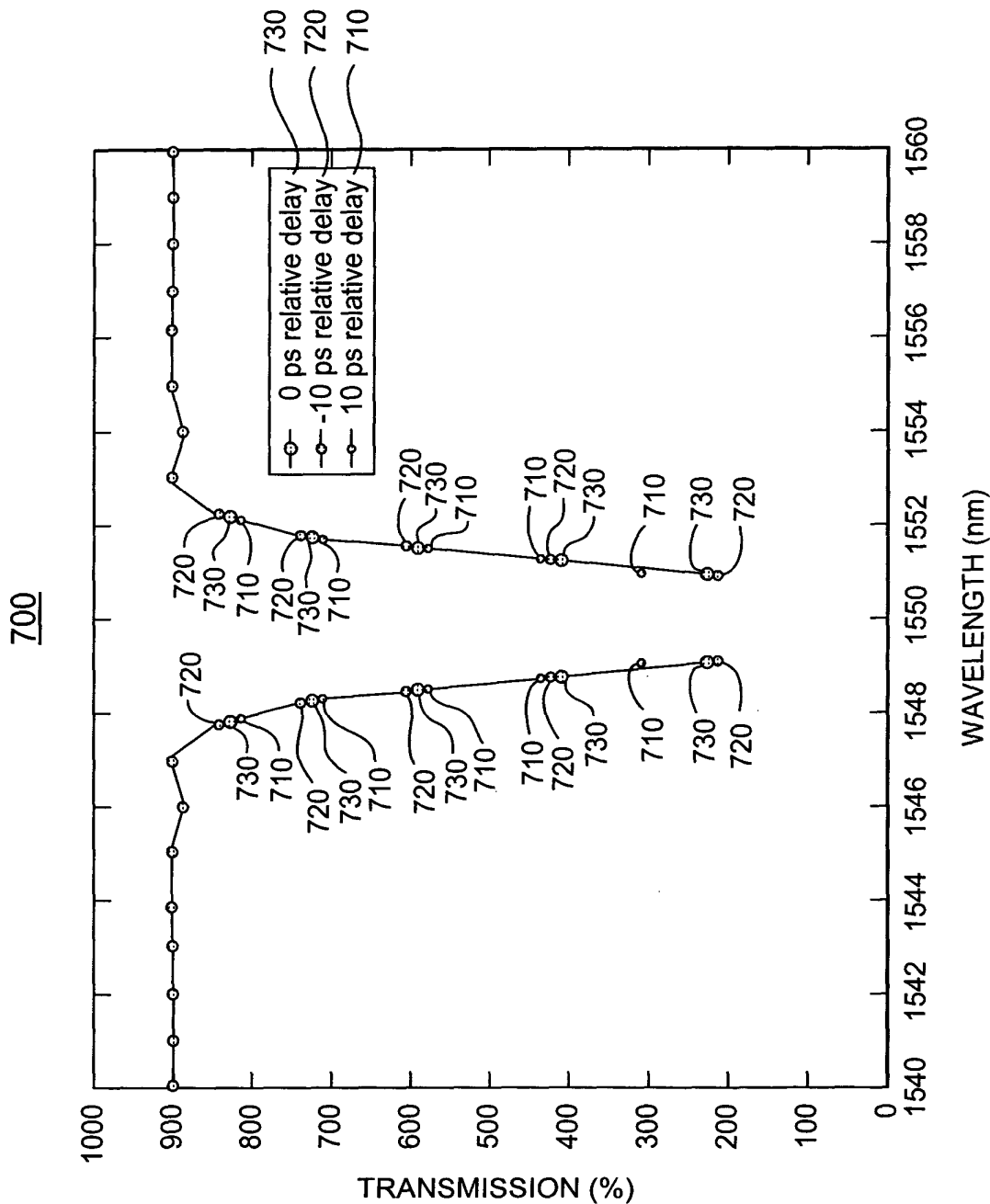


FIG. 7



9/22

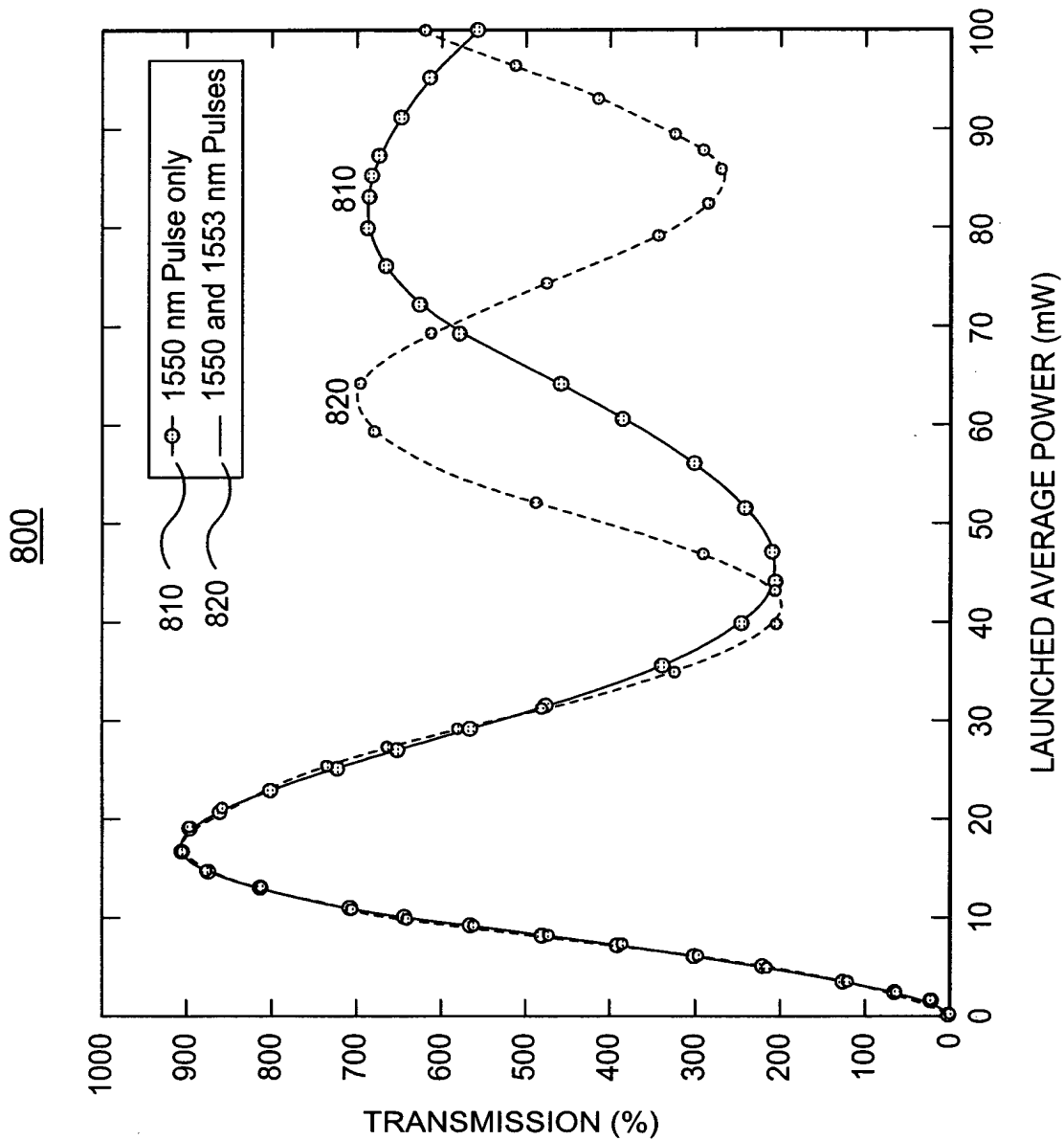


FIG. 8



10/22

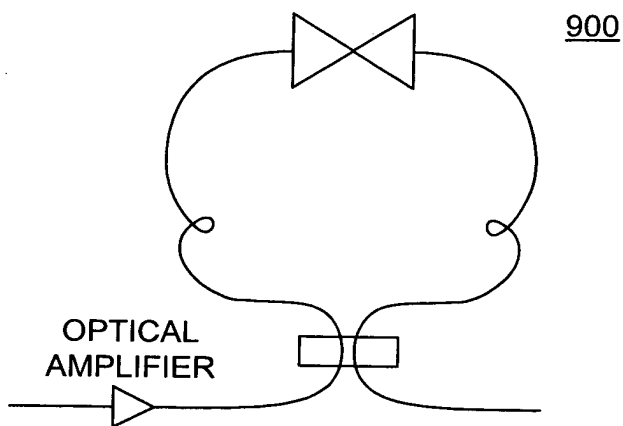


FIG. 9A

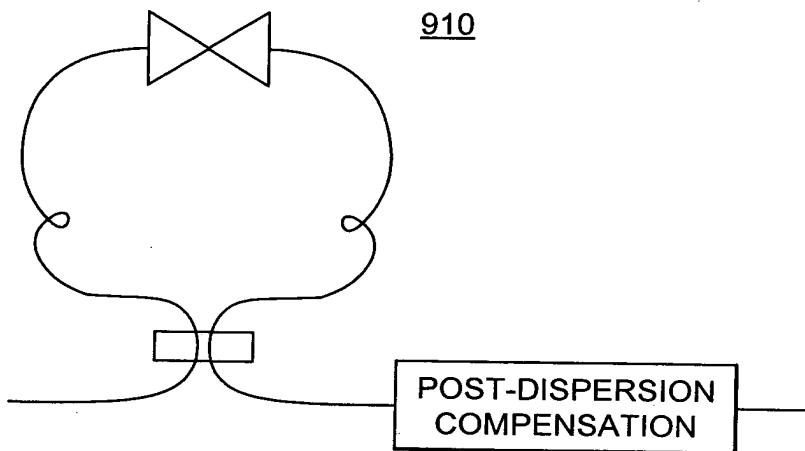


FIG. 9B

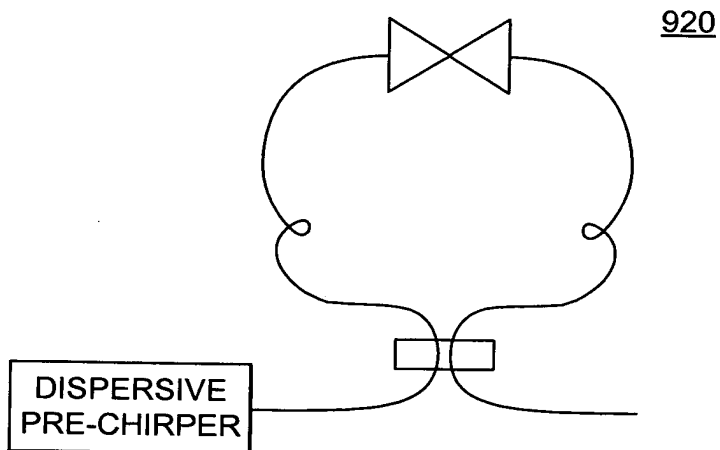


FIG. 9C

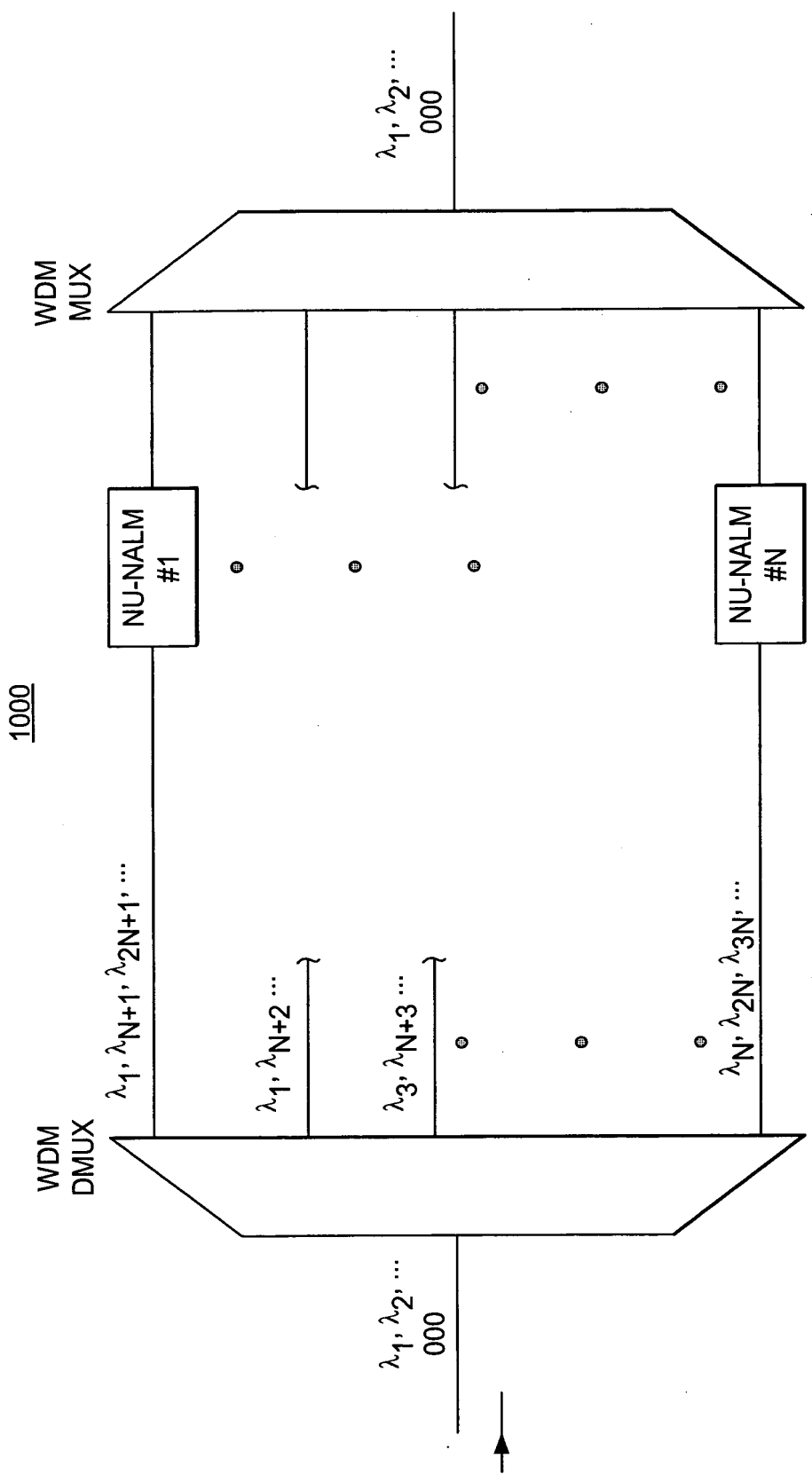


FIG. 10



12/22

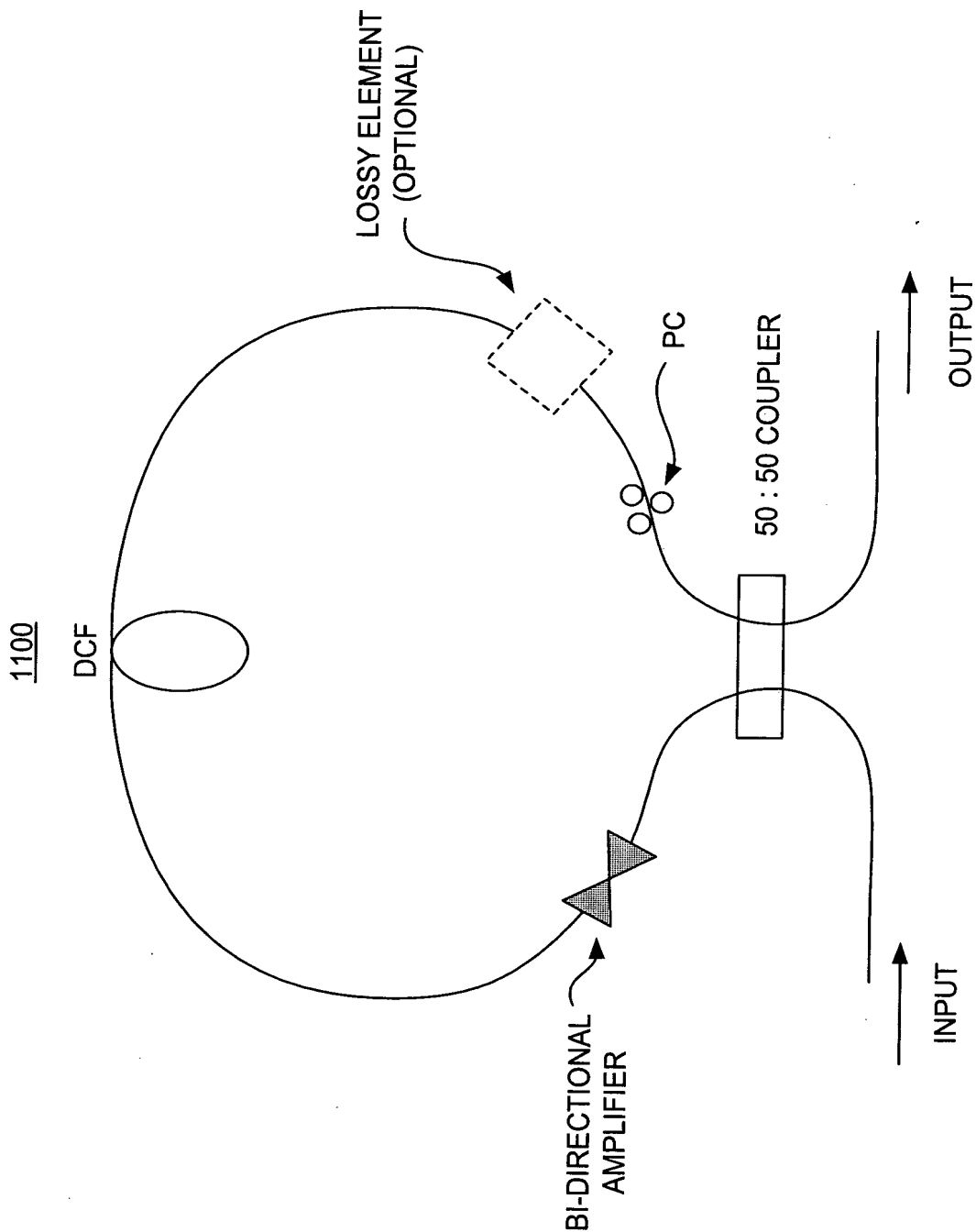


FIG. 11



13/22

1200

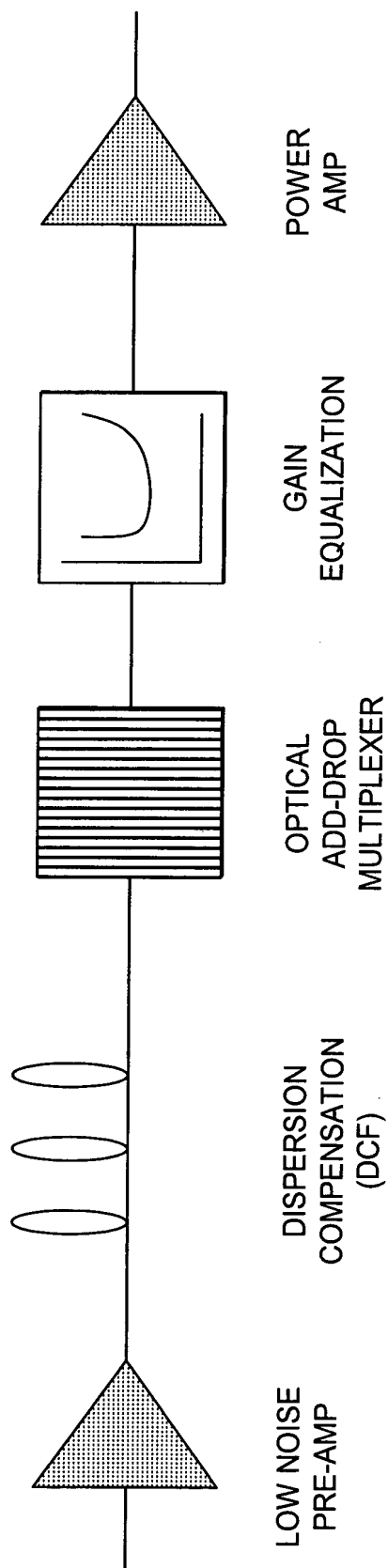


FIG. 12



Appln. S/N 09/784,649
Atty's Dkt: 069204.0167
For: **SNR Booster for WDM Systems**
By: Mohammed N. Islam
File Date: February 14, 2001 - Page 14 of 22

14/22

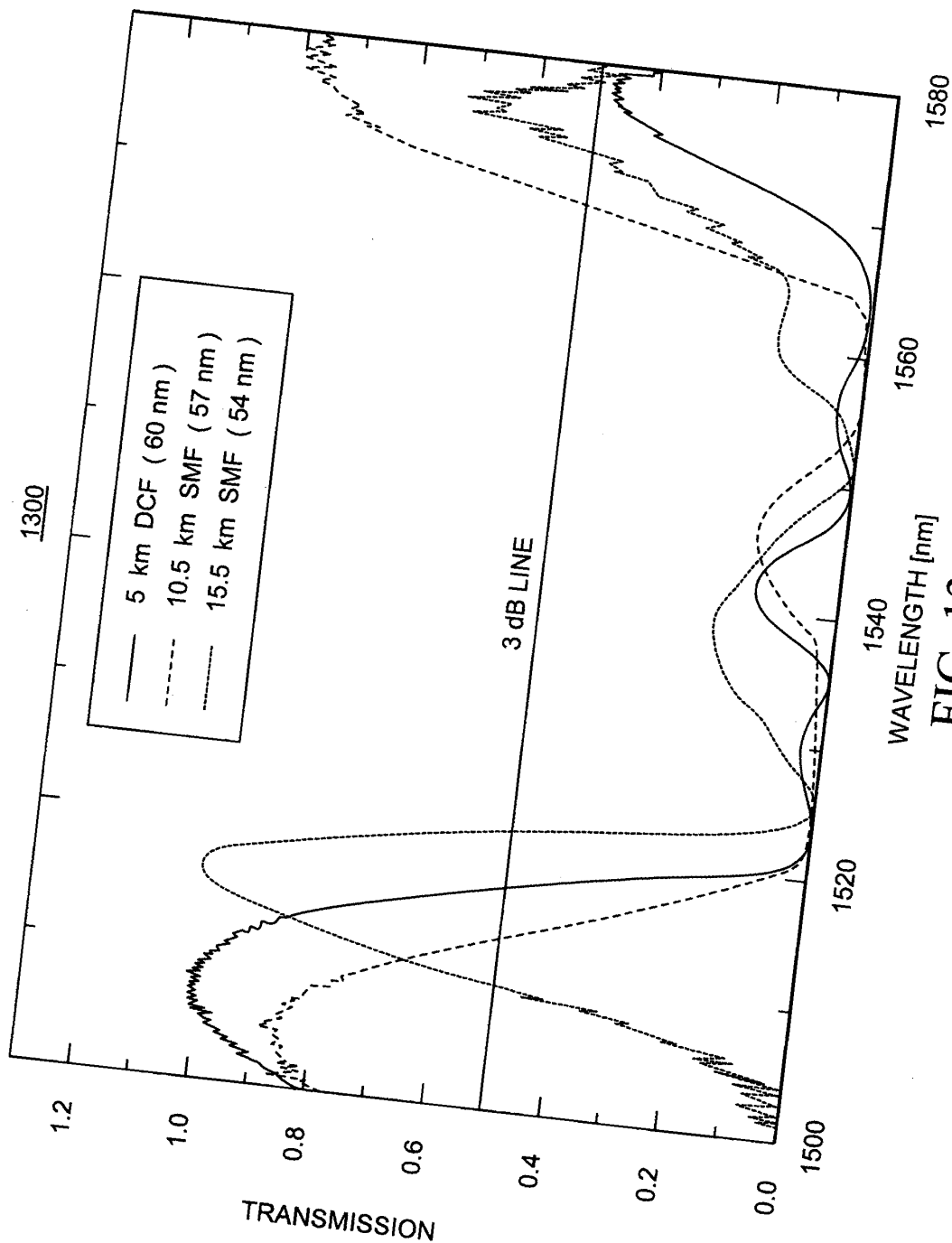


FIG. 13



15/22

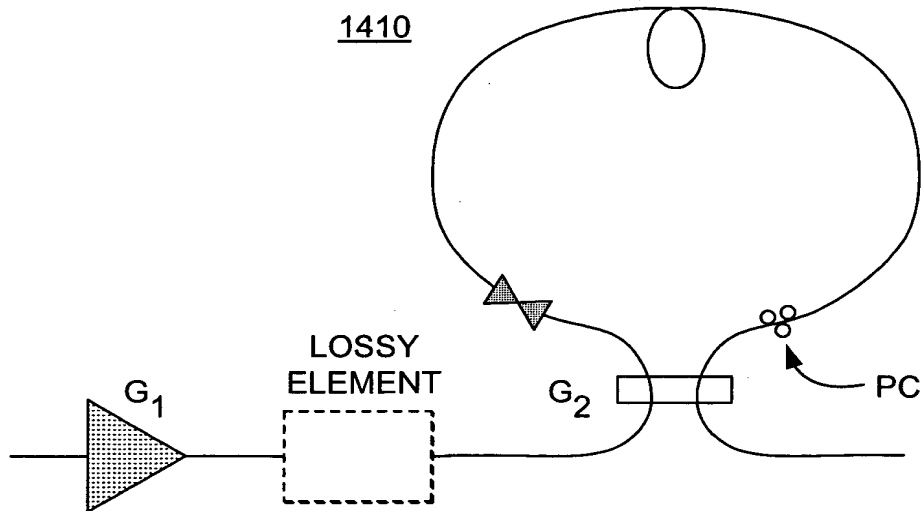


FIG. 14A

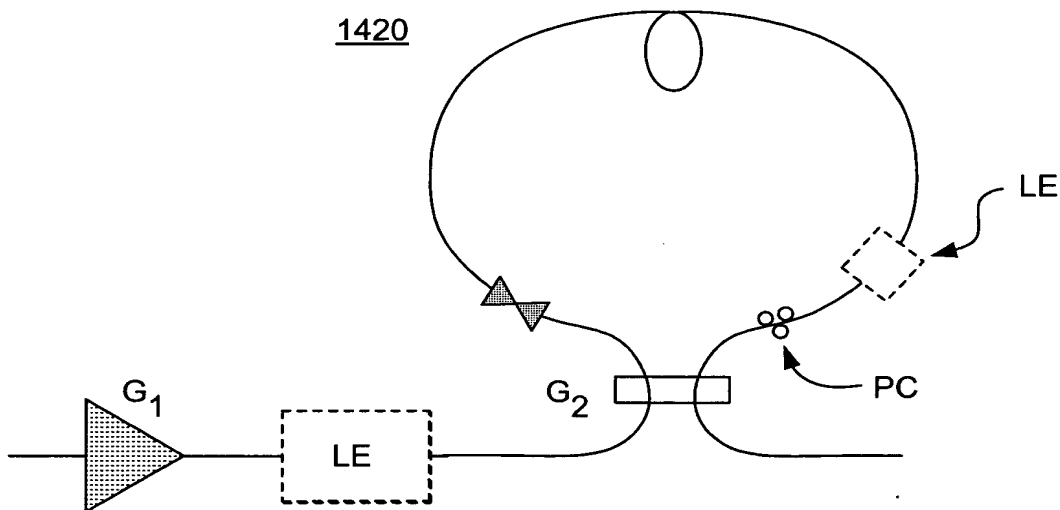


FIG. 14B

1430

P_{in} (dBm)	G_1 (dB)	G_2 (dB)	P_{out} (dBm)
-11	0	30	9.18
-11	5	25	9.17
-11	10	20	9.16
-11	15	15	9.10

FIG. 14C

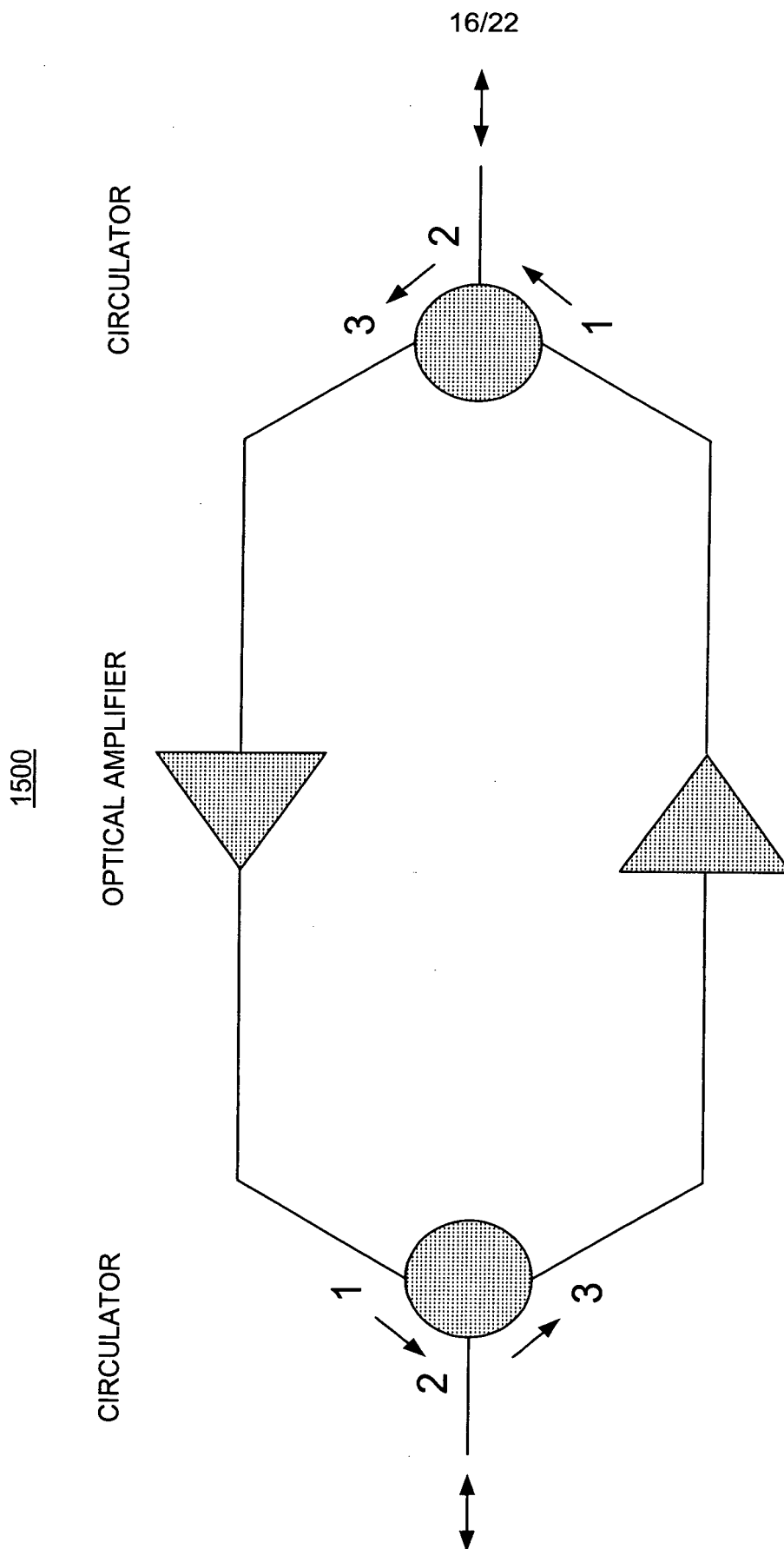


FIG. 15



17/22

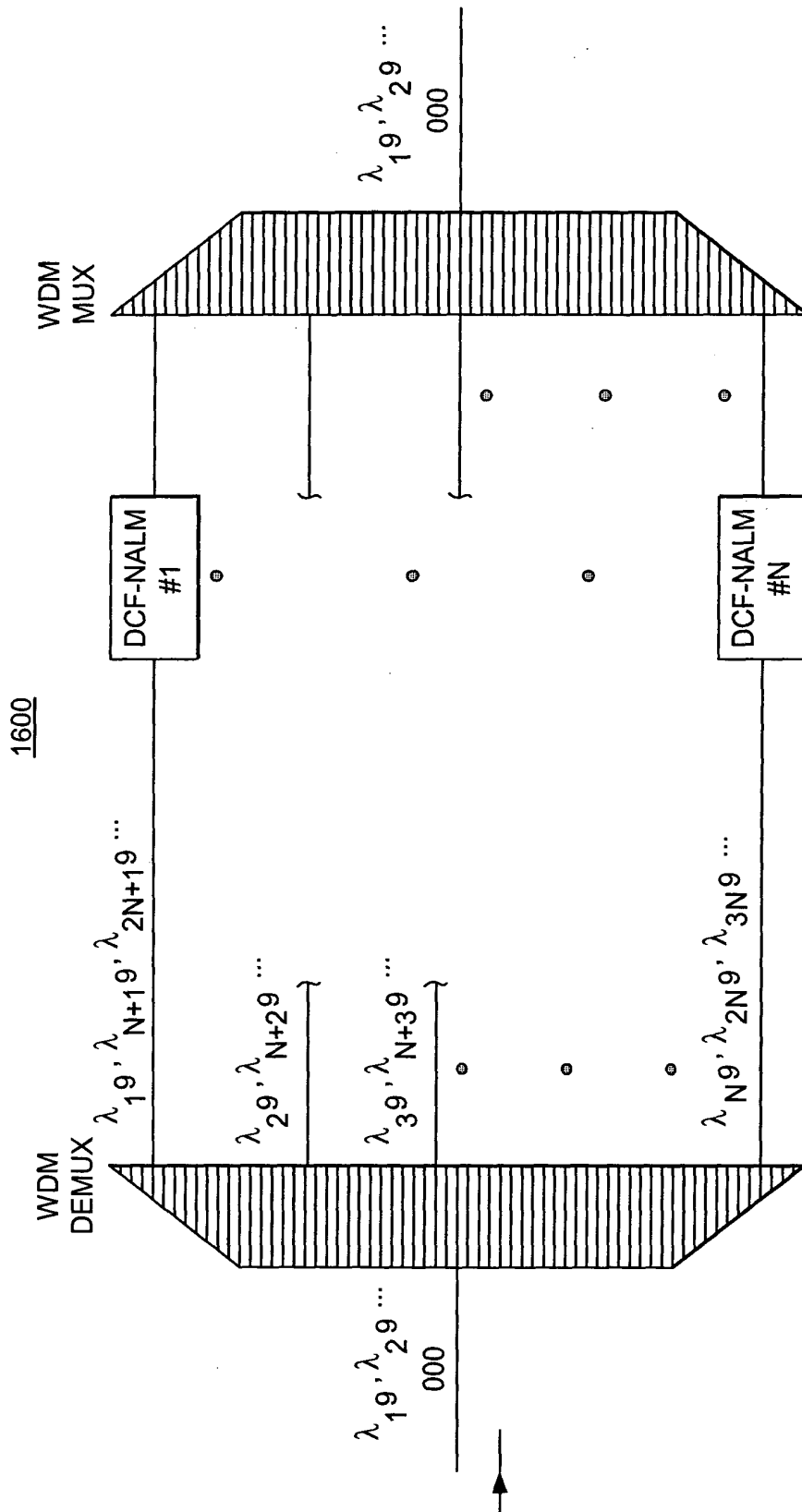
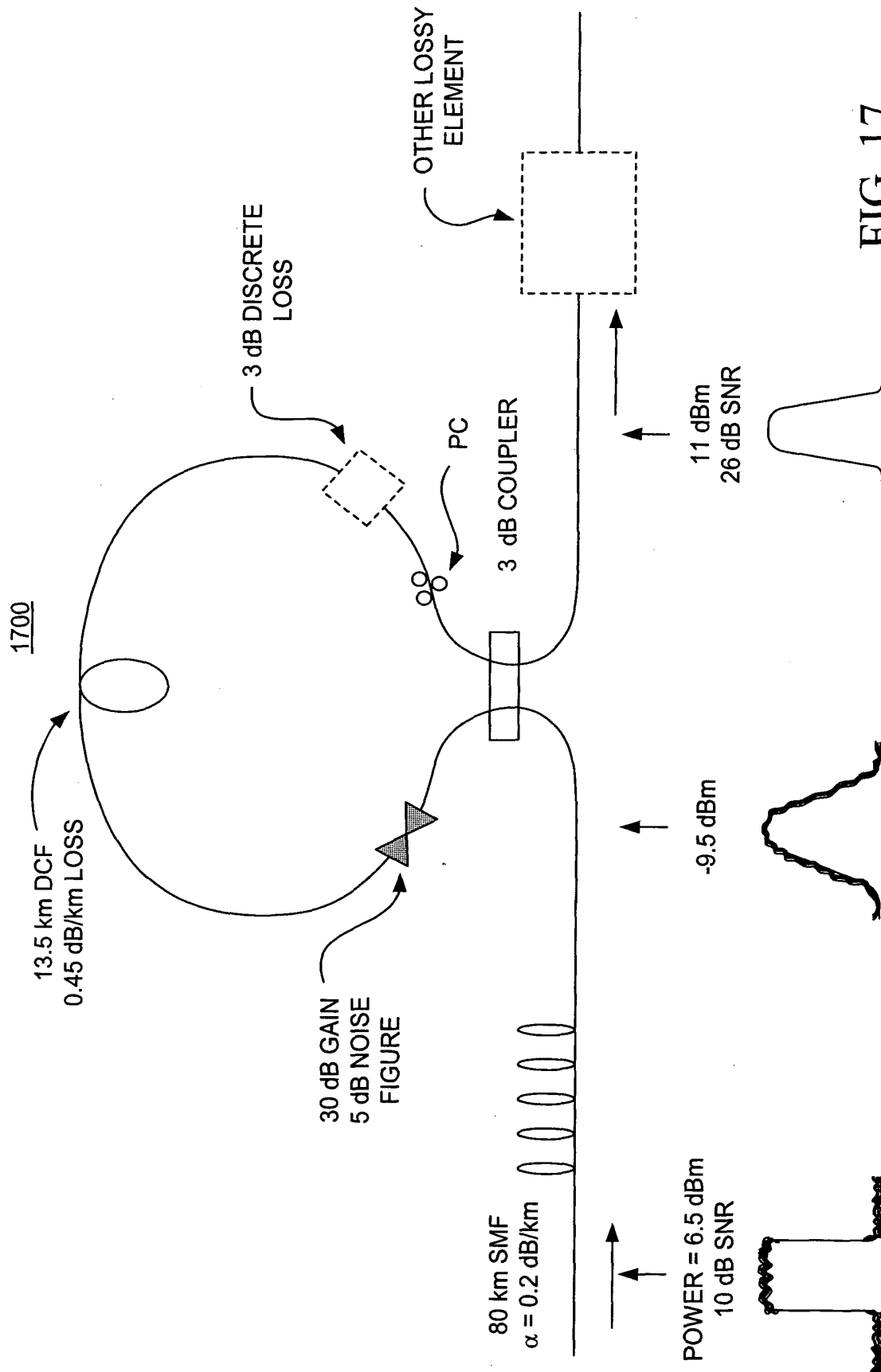


FIG. 16



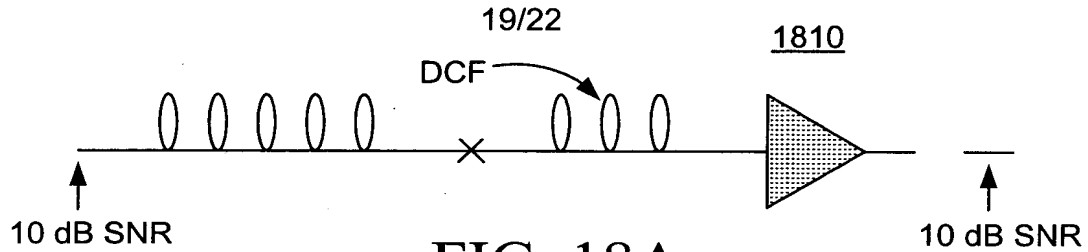
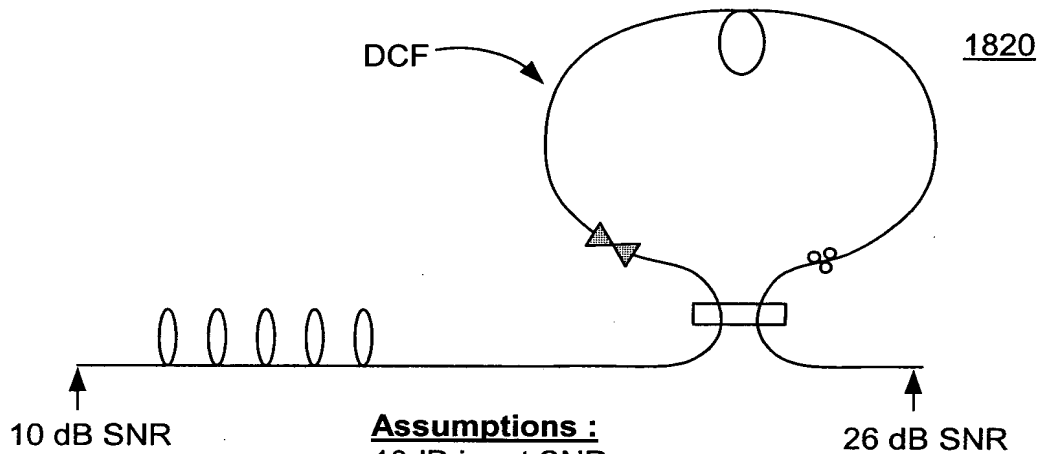


FIG. 18A



Assumptions :
-10dB input SNR
(5 GHz bandwidth)
-5 dB amplifier NF

Results :
16 dB improvement in SNR

FIG. 18B

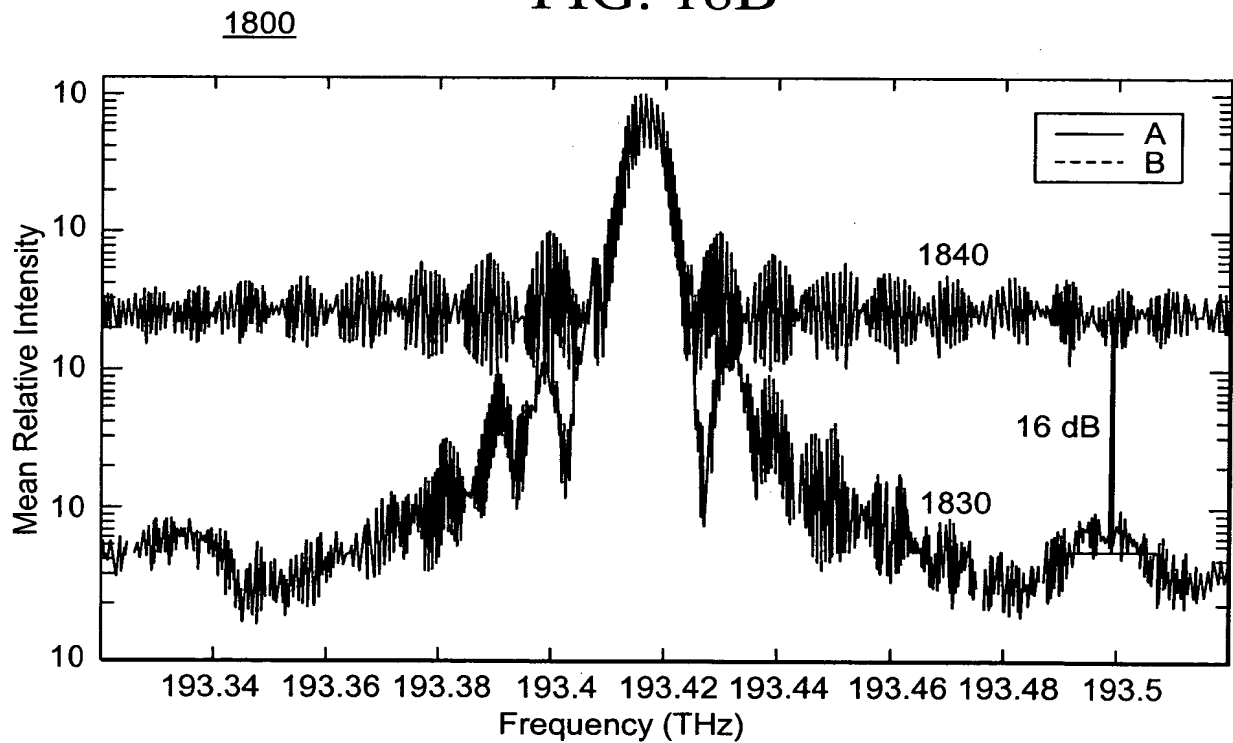


FIG. 18C



20/22

1900

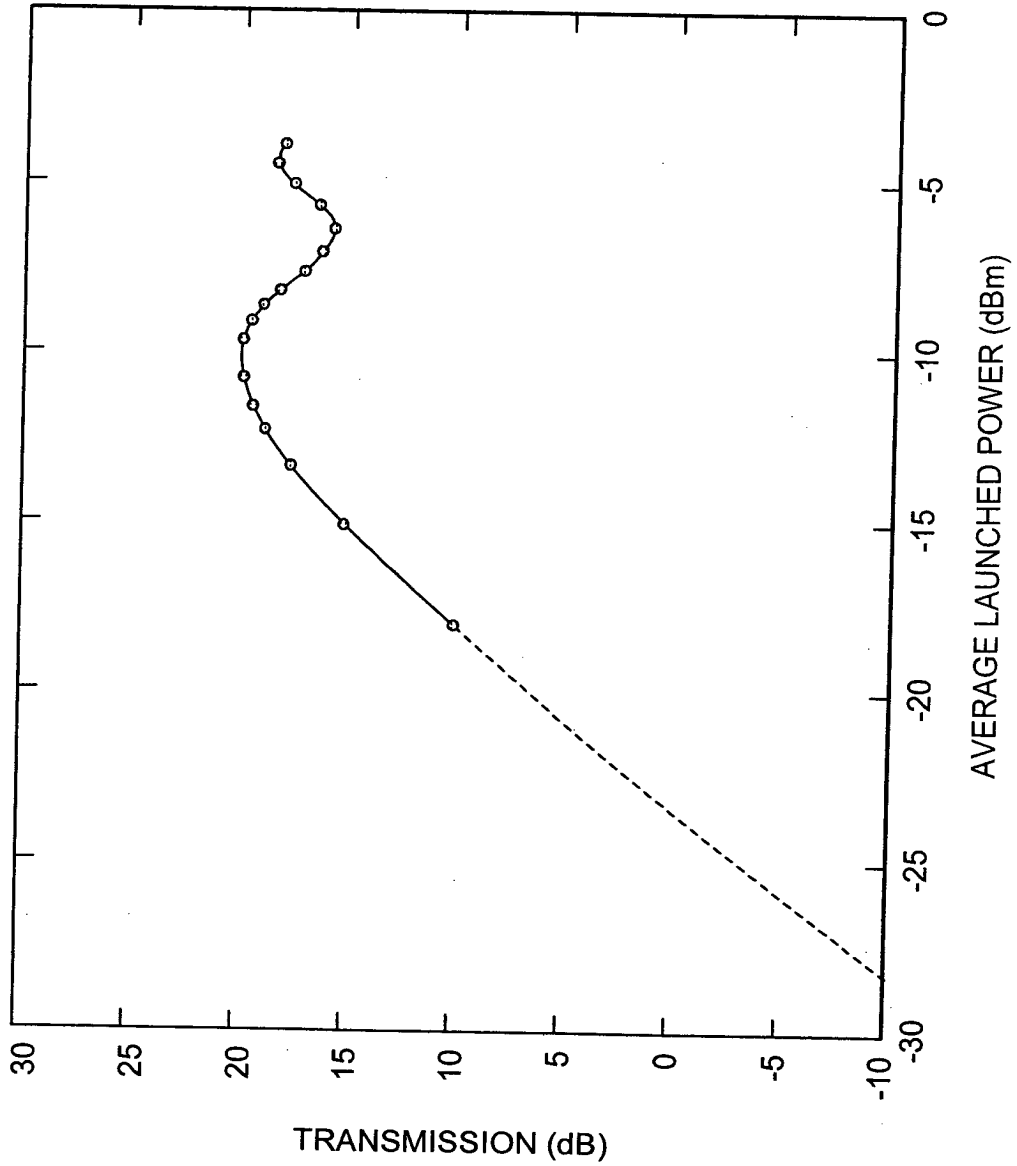


FIG. 19

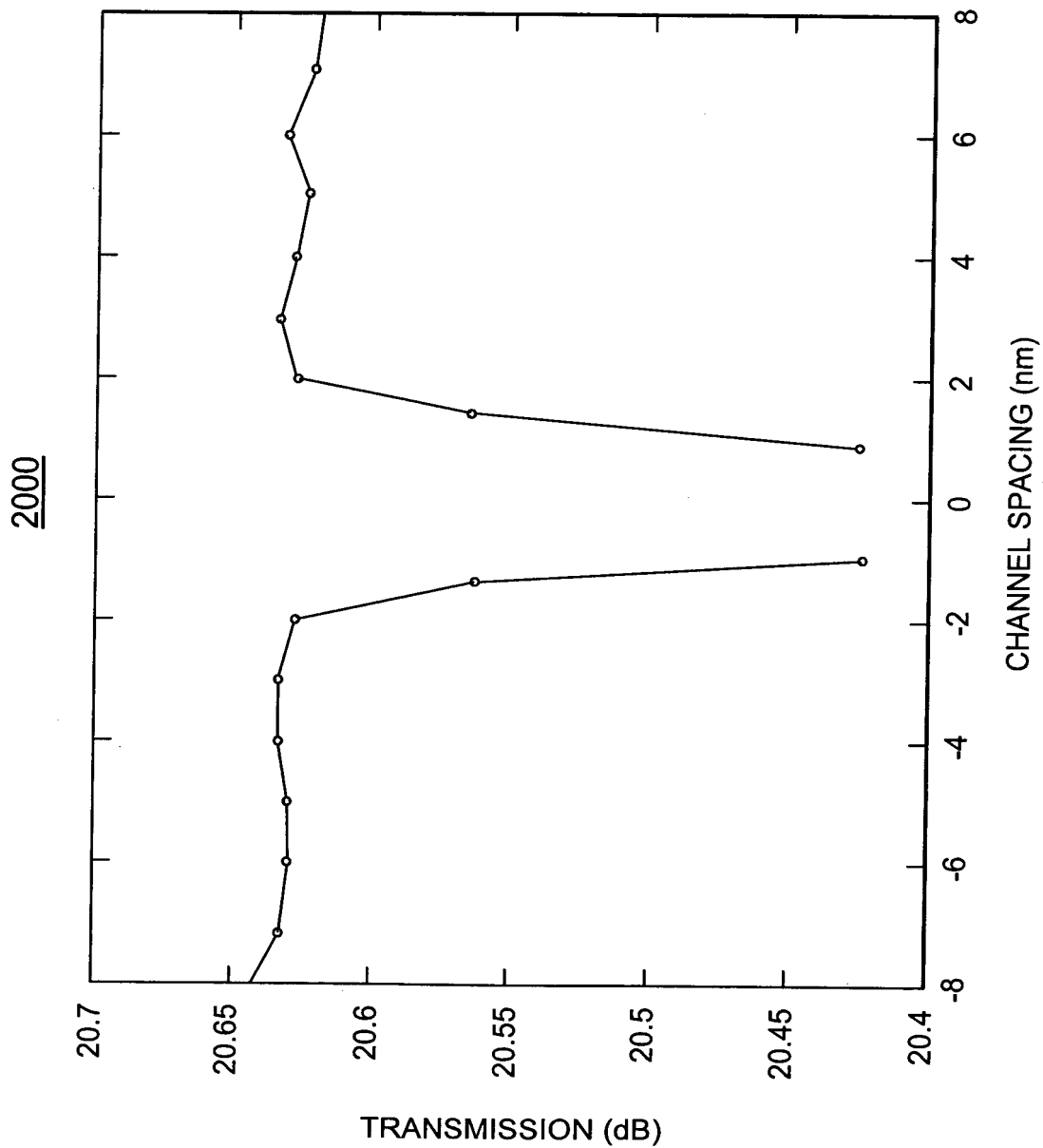


FIG. 20



22/22

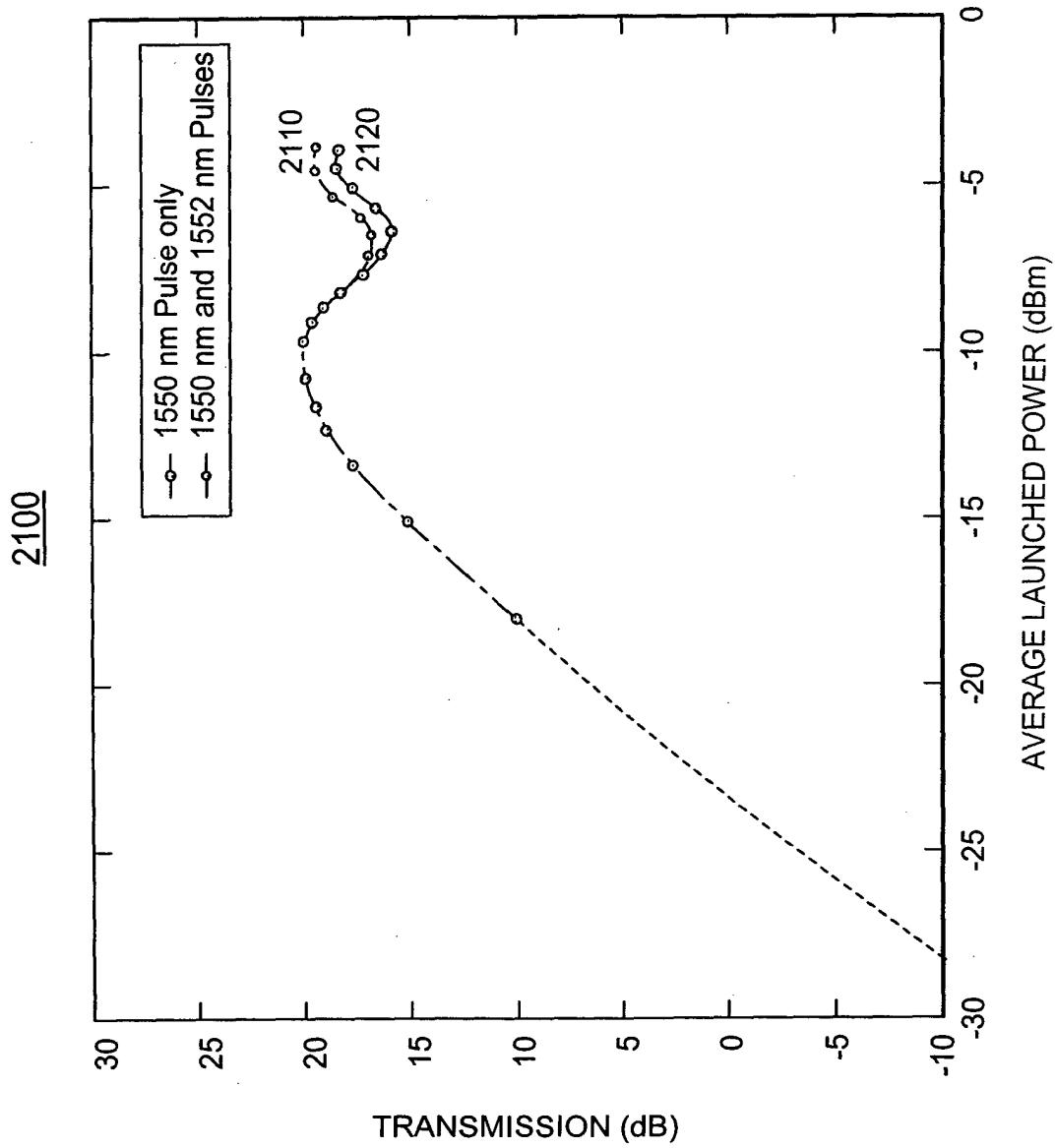


FIG. 21